

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Torsten Wahler
Appl. No.: 10/537,905
Conf. No.: 9223
Filed: May 30, 2006
Title: GEARING
Art Unit: 3681
Examiner: R. L. PANG
Docket No.: 119618-96

Commissioner for Patents
P.O. Box 1450
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PRE-APPEAL BRIEF

Sir:

This request is submitted in response to the Advisory Action dated June 16, 2008. This request is filed contemporaneously with USPTO form PTO/SB/33, "Pre-Appeal Brief Request for Review," form PTO/SB/31 and "Notice of Appeal" and Petition for a Two (2) Month Extension of Time.

REMARKS

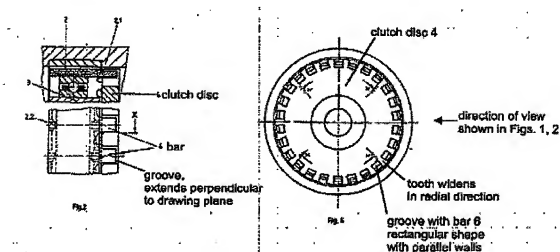
I. Rejections Under 35 USC 103

1. The rejection to claim 1 under 35 USC 103(a) as unpatentable over Fischer in view of Stall is improper.

The Examiner comments, on page 2 of the Advisory Action, that Fischer discloses a clutch bars 6 (i.e. driving pins) that are always flat (referring to Fig. 2). He posits that the indentations that they connect in between (i.e. radially extending grooves of the mating gear) can be flat (i.e. have parallel sides), trapezoidal or have a pointed tooth profile. Referring to Fig. 4, the Examiner states that the indentations that are shown are in the trapezoidal form, and the grooves in the Stall reference show grooves with a pointed tooth profile (the inverted form of the trapezoidal groove shown in Fischer). Fischer states, the Examiner continues, that the grooves can be of a pointed tooth profile and Stall shows the form of the pointed tooth grooves, wherein

the outer distance between opposing outer edges is larger than an inner distance between opposing inner edges (Fig. 4a). Appellants respectfully disagree.

The annotated Figures (Figs. 2 and 4 of Fischer) represented below support Appellants arguments that follow.



Fischer shows that each tooth of the clutch disc 4 widens in a radial direction. This is consistent with the description in paragraph 18 of the English translation. Fig. 4 also shows that each groove has a rectangular shape with parallel walls. Each groove is configured to receive a clutch bar 6, as shown in Fig. 2.

Claim 1, on the other hand, requires driving pins that are shaped on a lateral face of the toothed band and arranged to engage in radially extending grooves in the mating gear. In each groove, a difference between the outer edge and the inner edge on a circular arc is selected so that an outer distance between opposing outer edges of a groove is larger than an inner distance between opposing inner edges of a groove. That is, each groove widens in a radial direction, as shown in Fig. 5 of the instant invention. Whereas, in Fischer, the teeth widen in a radial direction, but not the grooves. In such a groove, the outer distance between opposing outer edges of the groove is the same as the inner distance between opposing inner edges of the groove. That is, the walls of the groove are parallel, as shown in Fig. 4.

Additionally, in the claimed invention, the driving pins engage with the grooves. In Fischer, the Examiner views the clutch bars 6 as driving pins. These clutch bars 6 engage with

the grooves of the clutch disc 4, as shown in Figs. 2 and 4. In response, the Examiner (in the Advisory and Final Actions) argues that even if Appellant's interpretation of "indentation" in Fischer as the gear teeth profile were true, a trapezoidal or pointed tooth profile would still yield the same grooves as claimed. Appellant respectfully disagrees. The trapezoidal tooth profile shown in Fig. 4 yields rectangular shaped grooves, as discussed above. Absent any particular description of illustrate in Fischer, Appellant does not understand what Fischer means when referring to a "flat" or "pointed" tooth profile. Flat or pointed with respect to what, or in what direction? There is no disclosure of any resulting groove, or whether such a groove would in fact meet each and every limitation recited in the claimed invention.

The Examiner cites Stall to provide a more concrete visual example of a groove that teaches the claimed limitations. Regarding the shape of the groove, the Examiner refers to Fig. 4a of Stall, which shows a series of inner teeth 4 opposite a series of shaft teeth 2. Each series of teeth is a sinusoidal structure, wherein neighboring peaks are separated by a wave trough and capped to form the teeth. The sinusoidal structures are offset from each other so that a tooth extends into an opposite wave trough.

Stall's series of teeth do not have grooves meeting the limitations of the claimed invention. Moreover, if the wave troughs are viewed as grooves, each groove has only an outer edge but no inner edge. As shown in Fig. 4a, the bottom of the wave trough does not have an edge. Consequently, Stall does not disclose a groove having an outer edge and an inner edge, and the requirement regarding the difference between these edges.

2. The rejection to Claim 4 under 35 USC 103(a) as unpatentable over Fischer in view of Stall, further in view of Hirn is improper for at least the same reasons presented in the arguments above, and for the following reasons. Absent unacceptable hindsight that uses Appellant's claimed invention as a template for improperly modifying the prior art, Fischer or Stall provide no suggestion for modifying the teeth and grooves, as recited in the claim 1.

II. Conclusion

In light of the above, the Applicants submit that all the claims are both novel and non-obvious over the prior art of record. Accordingly, the Appellants respectfully request that a

Notice of Allowance be re-issued in this case. If any additional fees are due in connection with this application as a whole, the Director is authorized to deduct said fees from Deposit Account No.: 02-1818. If such a deduction is made, please indicate the attorney docket number (119618-96) on the account statement.

Respectfully submitted,

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Dated: August 26, 2008